Remarks

Rejection Under 35 USC §112, 2nd Paragraph

The Examiner rejected Claims 1-5 under 35 USC §112, 2nd Paragraph, alleging that the claims are indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner states that Claims 1-4 define variables (where applicable- e.g., R_{11}-R_{15}) as aryl, heterocycle/heterocyclic. Furthermore, the Examiner asserts that the "terms are indefinite since the specification does not define the ring size, heteroatom(s), number and nature of the substituents, and the exact point of contact with the atom(s) for the substituents". The Examiner requested "correction". The Examiner then went on to say that Claim 5 is rejected because it is dependent on a rejected independent claim.

Applicants respectfully disagree with the rejection of Claims 1-5. The specification is very clear in defining what is meant by the terms "aryl", "heterocycle" and "heterocyclic". For example, beginning on page 8, the specification states the following:

> *The term "aryl" means a phenyl or naphthyl group.*
>
> *Heterocycle or heterocyclic radical means ring systems which, apart from carbon, also comprise heteroatoms such as, for example, nitrogen, oxygen or sulfur. This definition also includes ring systems in which the heterocycle or the heterocyclic radical is fused to benzene nuclei.*
>
> *Suitable "heterocyclic rings" or "heterocyclic radicals" are acridinyl, azocinyl, benzimidazolyl, benzofuryl, benzothienyl, benzothiophenyl, benzoxazolyl, benzthiazolyl, benztriazolyl, benztetrazolyl, benzisoxazolyl, benzisothiazolyl, benzimidazalinyl, carbazolyl, 4aH-carbazolyl, carbolinyl, quinazolinyl, quinolinyl, 4H-quinolizinyl, quinoxalinyl, quinuclidinyl, chromanyl, chromenyl, cinnolinyl, decahydroquinolinyl,*

2H,6H-1,5,2-dithiazinyl, dihydrofuro[2,3-b]-tetrahydrofuran, furyl, furazanyl, imidazolidinyl, imidazolinyl, imidazolyl, 1H-indazolyl, indolinyl, indolizinyl, indolyl, 3H-indolyl, isobenzofuranyl, isochromanyl, isoindazolyl, isoindolinyl, isoindolyl, isoquinolinyl (benzimidazolyl), isothiazolyl, isoxazolyl, morpholinyl, naphthyridinyl, octahydroisoquinolinyl, oxadiazolyl, 1,2,3-oxadiazolyl, 1,2,4-oxadiazolyl, 1,2,5-oxadiazolyl, 1,3,4-oxadiazolyl, oxazolidinyl, oxazolyl, oxazolidinyl, pyrimidinyl, phenanthridinyl, phenanthrolinyl, phenazinyl, phenothiazinyl, phenoxathiinyl, phenoxazinyl, phthalazinyl, piperazinyl, piperidinyl, pteridinyl, purinyl, pyranyl, pyrazinyl, pyrazolidinyl, pyrazolinyl, pyrazolyl, pyridazinyl, pyridooxazoles, pyridoimidazoles, pyridothiazoles, pyridinyl, pyridyl, pyrimidinyl, pyrrolidinyl, pyrrolinyl, 2H-pyrrolyl, pyrrolyl, tetrahydrofuranyl, tetrahydroisoquinolinyl, tetrahydroquinolinyl, 6H-1,2,5-thiadazinyl, thiazolyl, 1,2,3-thiadiazolyl, 1,2,4-thiadiazolyl, 1,2,5-thiadiazolyl, 1,3,4-thiadiazolyl, thienyl, triazolyl, tetrazolyl and xanthenyl.

Pyridyl stands both for 2-, 3- and 4-pyridyl. Thienyl stands both for 2- and 3-thienyl. Furyl stands both for 2- and 3-furyl.

The corresponding N-oxides of these compounds are also included, that is to say, for example, 1-oxy-2-, 3- or 4-pyridyl.

Also included are derivatives of these heterocycles which are benzo-fused one or more times.

The heterocyclic rings or heterocyclic radicals may be substituted one or more times by suitable groups such as, for example, F, Cl, Br, I, CF_3, NO_2, N_3, CN, COOH, $COO(C_1\text{-}C_6)$alkyl, $CONH_2$, $CONH(C_1\text{-}C_6)$alkyl, $CON[(C_1\text{-}C_6)alkyl]_2$, $(C_1\text{-}C_6)$-alkyl, $(C_2\text{-}C_6)$-alkenyl, $(C_2\text{-}C_6)$-alkynyl, O-$(C_1\text{-}C_6)$-alkyl, where one or more than one, or all hydrogen(s) in the alkyl radicals may be replaced by fluorine;

PO_3H_2, SO_3H, SO_2-NH_2, $SO_2NH(C_1$-$C_6)$-alkyl, $SO_2N[(C_1$-$C_6)$-alkyl]$_2$, S-$(C_1$-$C_6)$-alkyl, S-$(CH_2)_n$-phenyl, SO-$(C_1$-$C_6)$-alkyl, SO-$(CH_2)_n$-phenyl, SO_2-$(C_1$-$C_6)$-alkyl, SO_2-$(CH_2)_n$-phenyl, where n can be 0-6, and the phenyl radical may be substituted up to twice by F, Cl, Br, OH, CF_3, NO_2, CN, OCF_3, O-$(C_1$-$C_6)$-alkyl, $(C_1$-$C_6)$-alkyl, NH_2; $C(NH)(NH_2)$, NH_2, NH-$(C_1$-$C_6)$-alkyl, N$((C_1$-$C_6)$-alkyl$)_2$, NH$(C_1$-$C_7)$-acyl, phenyl, O-$(CH_2)_n$-phenyl, where n may be 0-6, and where the phenyl ring may be substituted one to 3 times by F, Cl, Br, I, OH, CF_3, NO_2, CN, OCF_3, O-$(C_1$-$C_6)$-alkyl, $(C_1$-$C_6)$-alkyl, NH_2, NH$(C_1$-$C_6)$-alkyl, N$((C_1$-$C_6)$-alkyl$)_2$, SO_2-CH_3, COOH, COO-$(C_1$-$C_6)$-alkyl, $CONH_2$.

By its very nature, the recitation of a term such as, for example, benzothienyl, defines the ring size and heteroatom(s). Furthermore, the number and nature of the substituents is described in the text above. With respect to the Examiner's suggestion that the specification should define the exact point of contact with the atom(s) for the substituents, Applicants assert that, unless otherwise stated in the claim or the specification, they never intended to limit the point of attachment to a particular node i.e. all chemically-feasible points of attachment are within the scope of Applicant's invention. One skilled in the art would understand that this is what was intended by Applicants in the absence of stipulating substitution at a particular node. The claim is not indefinite because a point of attachment is not expressly recited. One skilled in the art would understand where substitution is chemically-feasible and where it is not.

For the sake of advancing the prosecution of this case, Applicants have amended Claim 1 to expressly incorporate language from the specification to define "aryl" and "heterocycle". Claims 2-5 ultimately depend from independent Claim 1 and contain all the limitations thereof. Applicants believe this amendment of Claim 1 should overcome the pending rejection of Claims 1-5 under 35 USC §112, 2nd Paragraph.

Respectfully submitted,
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